



CITY OF DURHAM | NORTH CAROLINA

Date: October 2, 2012

To: Thomas J. Bonfield, City Manager
Through: Keith Chadwell, Deputy City Manager
From: Donald F. Greeley, Director, Water Management
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Subject: Interim Redevelopment Policy for Water Main Reimbursement

Executive Summary

The City currently has a policy for utility (water and sewer) reimbursement for new development which is applicable when utility lines are extended to new areas and along existing streets for the first time. For redevelopment projects, where there are already existing utilities, the City currently does not have a reimbursement policy. Most redevelopment projects are targeted within the City's central core; the age of most utilities within this area ranges between 60-100 years old.

The City, through its longstanding Sewer Collection System Rehabilitation Program, has replaced/rehabilitated most of the sewer lines within the central core. The remaining lines in the area are currently scheduled for assessment and rehabilitation through existing contracts. However, on the water delivery side, the City just recently began to rehabilitate/replace water lines in the central core. Most of these older lines have significant tuberculation, which reduces the internal diameter of the lines and restricts flow. While these older lines can provide fire protection for existing development, they may not be able to meet new fire flow requirements for denser redevelopment.

Most redevelopment in the central core that is currently planned is in areas where the City will eventually replace the existing water lines with new lines. However, to meet newer fire flow requirements redevelopment projects in the area will need to replace existing lines and potentially upsize them earlier than the City's current replacement schedule. Because redevelopment will replace lines that the City has plans to ultimately replace, the Department is recommending a reimbursement policy for water line construction associated with redevelopment projects in the area shown in Figure 1.

While the recommendation of a final policy is pending evaluation, the Department proposes an interim policy be adopted to address active projects under consideration such as the Durham Co-Housing Project. The interim policy would reimburse project developers (redevelopment) for installation of water lines up to the size that currently exists; and the developer would pay for any required upsizing. Reimbursement would also be capped at the average construction costs; these costs will be based on recently bid projects in urban areas of the Triangle. The City Manager would also have the ability to negotiate an adjusted reimbursement rate on a case-by-case basis in the best interests of the City.

Recommendation

The Department recommends that the City Council:

1. Adopt an Interim Redevelopment Policy for Water Main Reimbursement for projects associated with redevelopment.

Background

In March 2012, staff from Water Management and Public Works met to discuss potential redevelopment projects within the central core of the City (See Figure 1). The discussion noted the limitations that the City's current water and sewer infrastructure may have on redevelopment projects as well as the impacts these projects may have on planned improvements to the water and sewer infrastructure. The impetus for the discussion centered on areas within the City's core that are currently under consideration for investment and/or expansion by developers and business owners. While the existing infrastructure is adequate for current customers, due to the aging infrastructure and changes in fire flow requirements, the existing infrastructure may not meet current standards required for redevelopment.

The City, through its longstanding Sewer Collection System Rehabilitation Program, has replaced/rehabilitated most of the sewer lines within the central core. The remaining sewer lines in the area are currently scheduled for assessment and rehabilitation through existing contracts. No street sewer lines are anticipated to be replaced with redevelopment. However, sewer outfall lines, which collect street lines, will have to be monitored as redevelopment occurs to ensure the City maintains adequate capacity.

On the water delivery side, the City just recently began to rehabilitate/replace water lines in the central core. Most of these smaller, older lines have significant tuberculation, which reduces the internal diameter of the lines and restricts flow. While these older lines can provide fire protection for existing development, they may not be able to meet new fire flow requirements for denser redevelopment. The responsibility for the necessary improvements to meet fire-flow demands on the distribution system at these property sites must be determined.

Issues and Analysis

In order to help develop a comprehensive redevelopment policy, the Department needs to study and understand the full extent of the improvements needed in areas targeted for redevelopment throughout the City. Meetings have been held with staff from Planning, Economic Development and the City Manager's Office as well as Downtown Durham Inc. to identify those areas. Additionally, the Department will need to study each area to determine the types of improvements that are needed. It is anticipated this will take through early 2013 to complete. Thus the Department could bring forward a final recommendation for a comprehensive policy by Spring 2013.

However, because there are a number of projects anticipated in the Durham Central Park area (DCP) which are moving forward, an interim strategy for reimbursement is recommended. The sewer collection system is adequate for upcoming projects. The fire flows for redevelopment projects such as the Durham Co-Housing project are not adequate based on the City's current development standards.

The Department conducted hydraulic modeling in order to more fully understand the type and magnitude of improvements necessary to meet or exceed the 3,000 gallon per minute (gpm) fire flow requirement for redevelopment within DCP. The modeling shows that replacing all the existing lines with lines of the new same size would ensure adequate fire flows for any type of redevelopment. It is not financially viable or equitable for one redevelopment project to fund replacement of the entire

area. Therefore, based on the modeling results noted for any given site, there are several different alternatives to meeting current standards by replacing only one or more lines. These vary from making a shorter extension with an oversized line(s) or a longer extension replacing the existing line with a new line the same size.

The Department is in the process of establishing a formalized Water Distribution Rehabilitation Program for individual areas of the distribution system, which would establish a long-term schedule for our rehabilitation program. Older lines with a poor maintenance history or lines demonstrating heavy tuberculation would be targeted for replacement. The lines in DCP meet these criteria; however, the planning and funding of the full replacement of these lines has not yet begun.

Since the City will be replacing these lines at some point in the future, there are several reimbursement options the City could consider for redevelopment projects that require water line improvements. These options are:

1. No reimbursement – fire flow is sufficient for the existing development so any cost associated for re-development should be borne by the developer
2. Partial reimbursement - only for replacement of lines up to the current waterline size. Since the City will eventually replace older lines with new ones, the City will reimburse the developer only up to the cost of installing the current size, and the developer would pay costs for installing a larger main.. In this case, the Department would recommend the upper limit of reimbursement be set to the City's typical construction costs for any given waterline size
3. Full reimbursement – This would include reimbursement for all improvements including any oversized lines necessary for a project.

Under Options #2 and # 3 it is important to establish an upper limit to any reimbursements to ensure the City is only reimbursing the costs associated with waterline improvements and not other costs the developer would incur.

Most of the most recent projects managed by the Department have been large diameter water line replacement projects. The associated costs with these projects do not translate to smaller diameter lines, such as 6" and 8" water lines. The only current cost information the City has for smaller diameter water lines is from projects managed by Public Works. These projects are for new water lines extended for valid petitions or as authorized under City Charter, Article 7 – Special Assessments for Improvements, Section 78. . The current average cost for a 6" water line is \$59 per linear foot (lf), as per Public Works. Recognizing that most of the projects performed by Public Works are in more suburban environments, construction costs in more urban settings like Durham Central Park were reviewed. Staff contacted several engineering consulting firms in the area which have performed municipal projects in urban settings. While the costs varied from firm to firm, the following is the average of the costs:

6" water line	\$ 117.00 per lf
8" water line	\$ 150.00 per lf
12" water line	\$ 200.00 per lf
16" water line	\$ 256.00 per lf

Based on this information related to typical urban water line construction, the Department recommends that the interim reimbursement policy adopt the above costs until more specific local information is available. At that time, the Department will bring forward a recommendation based on this evaluation; costs would be reviewed annually and updated as needed.

Based on the fact the water lines within the inner core of the City will be replaced by the City at some point in the future, the Department recommends Option #2 listed above for an interim policy until a comprehensive redevelopment policy can be developed. The proposed interim policy would apply in instances where the Developer needs to increase the size of a water main due to a) the needs of their particular project, and b) where the existing main is properly sized but needs replacement due to age-related conditions. The Department recommends partial reimbursement to Developers for the costs of constructing new water lines but only up to the size needed to meet the long-term needs of the Water Distribution System. This option limits the City's fiscal responsibility of replacing the existing lines and places any additional costs on the developer for what is needed for their project beyond the City's long term needs. Additionally, limiting the reimbursement costs to typical construction costs protects the City by ensuring developers seek competitive pricing for the construction.

Additionally, the Department recommends that the City Manager have the ability to negotiate adjustments to the reimbursement rate(s) on a case-by-case basis, in the best interests of the City.

Financial Impact

Adopting a reimbursement policy for development should have little to no impact on the Water and Sewer Fund and proposed rates. Any potential reimbursements would be for lines the City would ultimately replace as part of the Water Distribution System Rehabilitation Program. This program is currently funded annually as part of the City's Capital Improvement Program. Project funding in any given year would be adjusted to accommodate any potential reimbursements.

SDBE Summary

This item does not require review by the Equal Opportunity/Equity Assurance Department.

Attachments:

Figure 1 – Proposed Reimbursement Area